



CAIT

Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

QUARTERLY PROGRESS REPORT

Project Title:	Rut Testing of Hot Mix Asphalt		
RFP NUMBER:		NJDOT RESEARCH PROJECT MANAGER: Mr. Nicholas Vitillo	
TASK ORDER NUMBER/Study Number: Task Order No. 98 / 4-26677		PRINCIPAL INVESTIGATOR: Dr. Ali Maher	
Study Start Date: 01/01/2001 Study End Date: 3/31/2003		Period Covered: 2 nd Quarter 2003	

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Literature Search/Local Agency Survey	10%	25%	100%	10%
Lab Testing for Rutting Criteria	25%	20%	100%	25%
Lab Testing for NJ HMA Characterization	25%	15%	80%	20%
Lab Testing for SUPERPAVE vs Marshall	20%	10%	70%	14%
Field Calibration/Evaluation	10%	10%	35%	3.5%
Final Report	10%	10%	45%	4.5%
TOTAL	100%			77%

1. Progress this quarter by task:

- A. The final report for the APA Rutting Criteria was completed and given to the NJDOT. It was returned with needed corrections and these corrections are being finished for final submission.
- B. The Low Volume road section of the project is currently working on the fourth mix design. The first mix was just used as a "learning curve" mix due to the extreme fluctuations in aggregate gravities from the source quarry. The second mix design resulted in the Superpave and Marshall design methods indicating the same optimum asphalt content, while the third design should a difference of 0.4% binder. Gyratory samples were being made of this mix when problems occurred with the gyratory compactor. Currently, the compactor is being fixed at Interlaken Technologies (in Minnesota) because the device required a new gyration loading piston. Troxler will be providing RAPL with a loaner gyratory machine for the next year until their new model comes out. RAPL was in the midst of looking to purchase a new gyratory machine, with the Troxler model being less expensive than the Pine, however, the current Troxler model can not compact a sample of needed height for the dynamic modulus test. Troxler agreed to provide RAPL with another gyratory machine for free until their newer model comes out later this year. However, the Marshall design verification has started on the fourth job mix formula. Marshall samples are being made at 5.0, 5.5, 6.0, and 6.5% binder content, as well as at the optimum binder content of 5.7%. This allows for the comparison the job mix formula (JMF) Marshall volumetrics, as well as providing data to conduct a new mix design if the JMF parameters are not obtained.

2. Proposed activities for next quarter by task:

- A. The final reviewed report for the APA Rutting Criteria will be finished and submitted.
- B. The fourth Low Volume Road mix should be completed and the fifth mix started. The comparisons between the Marshall design and the Superpave designs will continue.

3. List of deliverables provided in this quarter by task (product date):

N/A

4. Progress on Implementation and Training Activities:

Department of Civil and Environmental Engineering
623 Bowser Rd. Piscataway NJ 08854-8014
Tel : 732-445-0579 Fax: 732-445-0577

CAIT Confidential

Rut-Testing-of-HMA-QR-6-1-2003-FINAL.doc

Page 1 of 1



CAIT

Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

N/A

5. Problems/Proposed Solutions:

N/A

6. Budget Summary*

Total Project Budget(# of years)	2 Years	\$321,867.00
Total Project Expenditure to date		\$270,402
% of Total Project Budget Expended		84%
Task Order Number/Study Number:		98 / 4-26677
Current Task Order Budget (# of years)	Year 1 and 2	\$321,867.00
Actual Expenditure to date against current task order		\$270,402
% of current task order budget expended		84%

* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.

Department of Civil and Environmental Engineering
623 Bowser Rd. Piscataway NJ 08854-8014
Tel : 732-445-0579 Fax: 732-445-0577

CAIT Confidential

Rut-Testing-of-HMA-QR-6-1-2003-FINAL.doc

Page 2 of 2